

The Biobehavioral Family Model: A Model for Integrated Medicine

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Faculty Disclosure

The presenters of this session have NOT had any relevant financial relationships during the past 12 months.

Conference Resources

Slides and handouts shared in advance by our Conference Presenters are available on the CFHA website at http://www.cfha.net/?page=Resources_2018



Slides and handouts are also available on the mobile app.

Learning Objectives

At the conclusion of this session, the participant will be able to:

- Articulate the **specific tenets** of the Biobehavioral Family Model.
- Describe **empirical evidence** supporting the Biobehavioral Family Model.
- Evaluate **clinical implications** derived from the Biobehavioral Family Model's pathways, and consider how the BBFM might **enhance training or practice** in their own professional context.

Bibliography / Reference

1. Wood, B. L., Miller, B. D., & Lehman, H. K. (2015). Review of family relational stress and pediatric asthma: The value of biopsychosocial systemic models. *Family Process, 54*(2), 376-389.
2. Woods, S. B., & Denton, W. H. (2014). The biobehavioral family model as a framework for examining the connections between family relationships, mental, and physical health for adult primary care patients. *Families, Systems & Health, 32*(2), 235-240.
3. Roberson, P. N. E., Shorter, R., Woods, S. B., & Priest, J. B. (2018). An examination of how health behaviors link romantic relationship dysfunction and physical health for middle and late aged adults. *Social Science & Medicine, 201*, 18-26.
4. Priest, J.B., Woods, S.B., & Roberson, P.N.E. (2018). In our lives and under our skin: An investigation of specific psychobiological mediators linking family relationships and health using the Biobehavioral Family Model. *Family Process*. Advance online publication.
5. Priest, J. B., Woods, S. B., Maier, C. A., Parker, E. O., Benoit, J. A., & Roush, T. R. (2015). The Biobehavioral Family Model: Close relationships and allostatic load. *Social Science & Medicine, 142*, 232-240.

Learning Assessment

A learning assessment is required for CE credit.

A question and answer period will be conducted at the end of this presentation.

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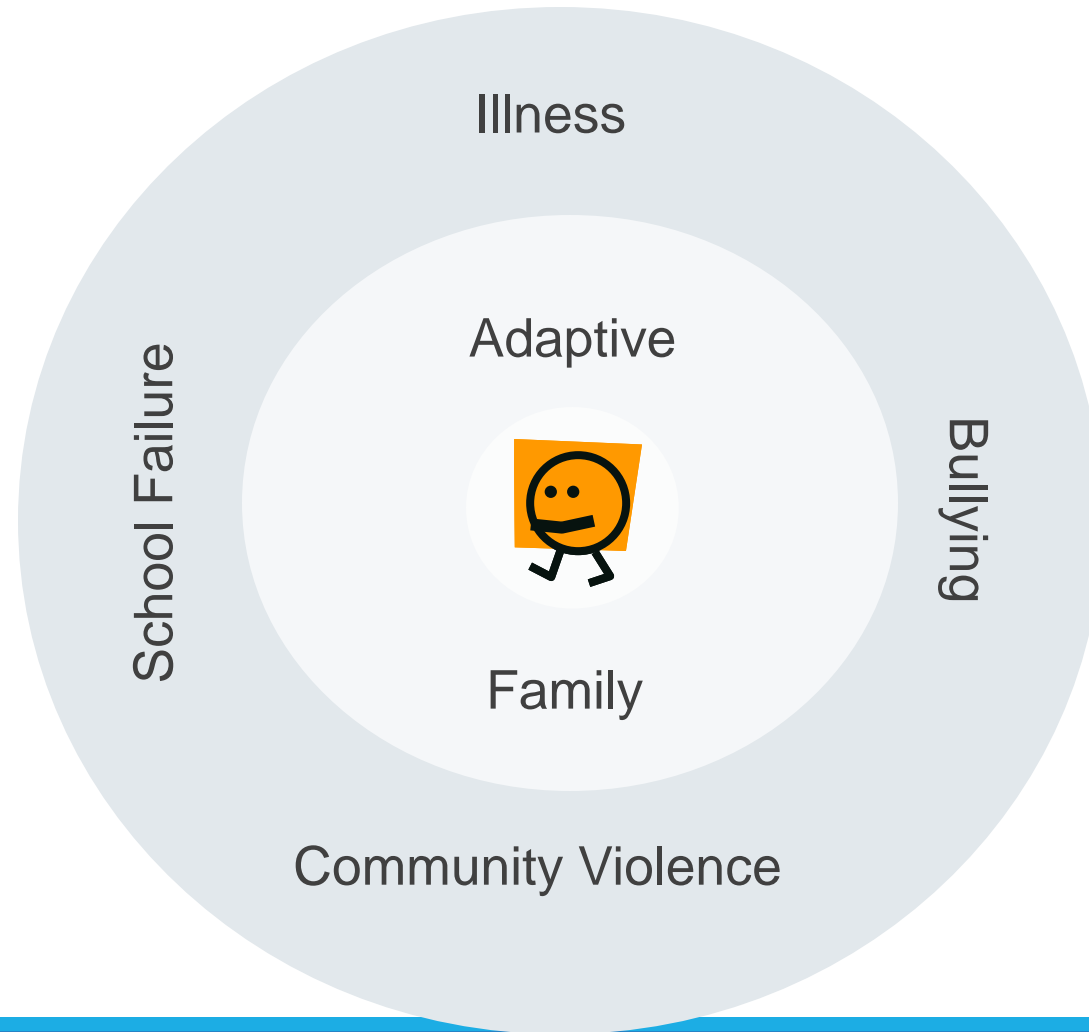
A Pragmatic Definition of Family

People who self-identify as “family,”
who are interconnected by interaction
with one another,
who have the responsibility of supporting each
others' physical, developmental and emotional needs.

*“Family” implies **biological, affective, and legal bonds**
occurring together, or separately.*



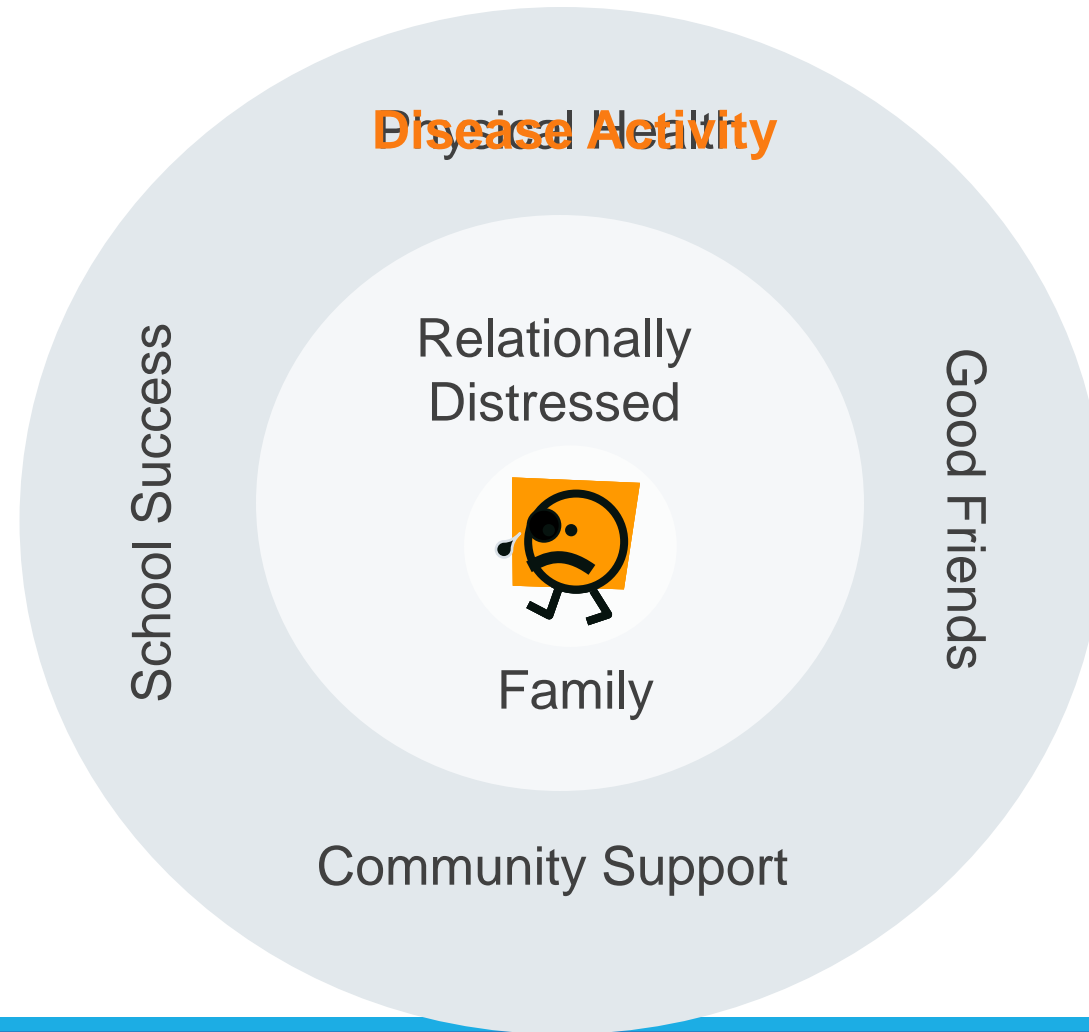
Positive family relational interaction buffer family members from stressors



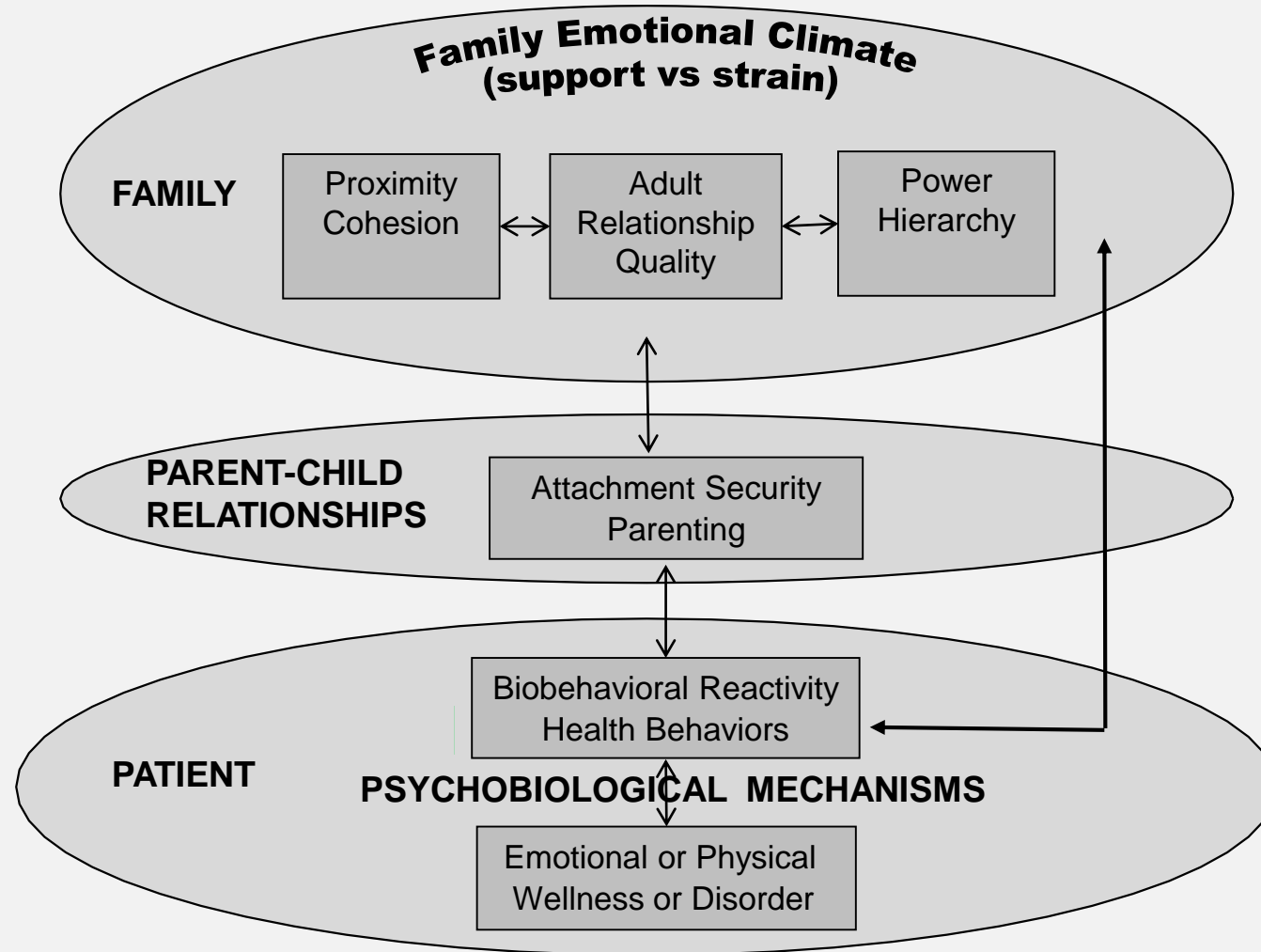
Negative family relational process compromises family stress regulation resulting in chronically stressed family members



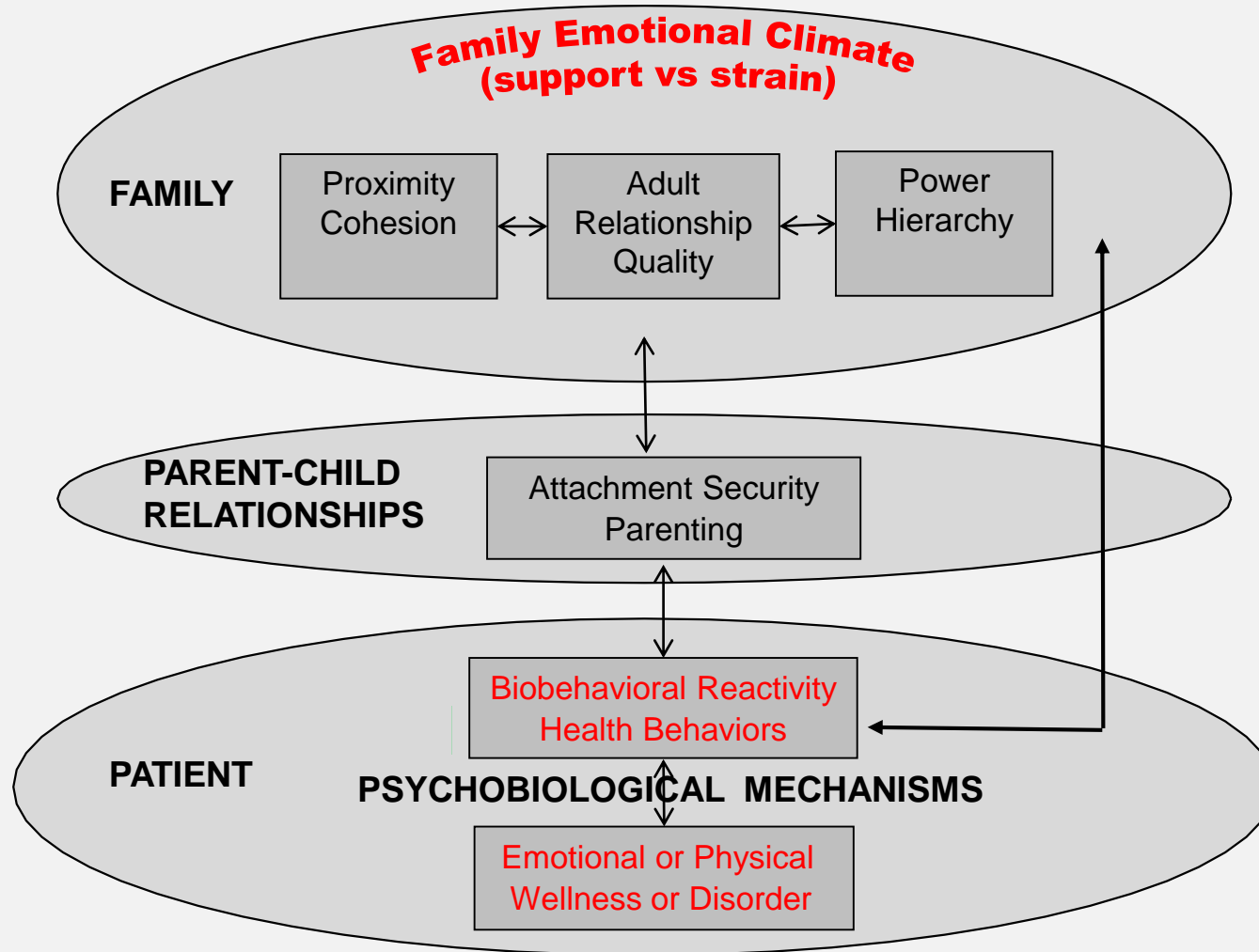
Negative family relational interaction can chronically stress family members even **without** external stressors



Biobehavioral Family Model for Primary Care

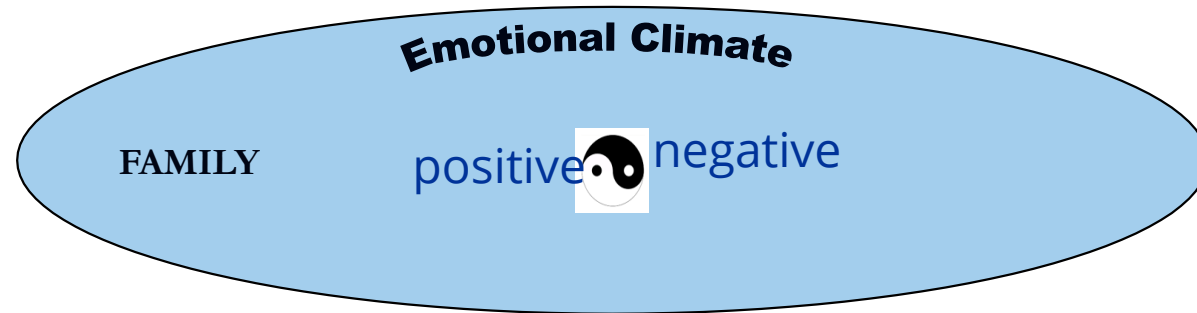


Biobehavioral Family Model for Primary Care





EMOTIONAL CLIMATE



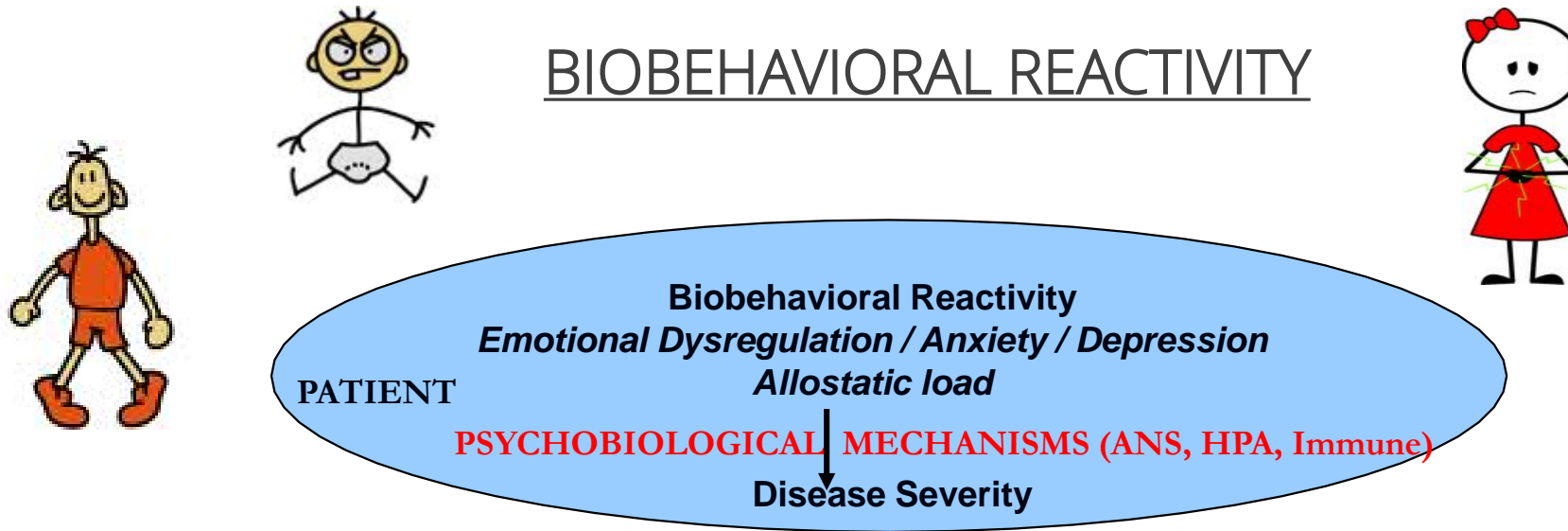
Emotional Climate = intensity and balance of positive versus negative emotional interactions among all family members

“Negative” includes hostility, criticism, verbal attacks, etc.

“Positive” includes warmth, affection, support, affirmation, etc.

Emotional climate balance  ***family emotion and stress regulation***

Emotional climate imbalance  ***family emotion and stress dysregulation***



Biobehavioral reactivity = the degree of emotional/physiological response to acute or chronic stress.

Emotion regulation = adaptive biobehavioral reactivity

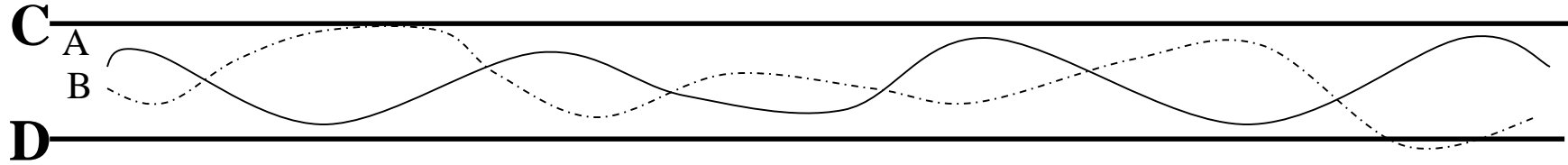
Emotion dysregulation = highly intense and erratic biobehavioral reactivity

Emotional regulation	↔	physiological regulation
Emotion dysregulation	↔	physiological dysregulation / allostatic load

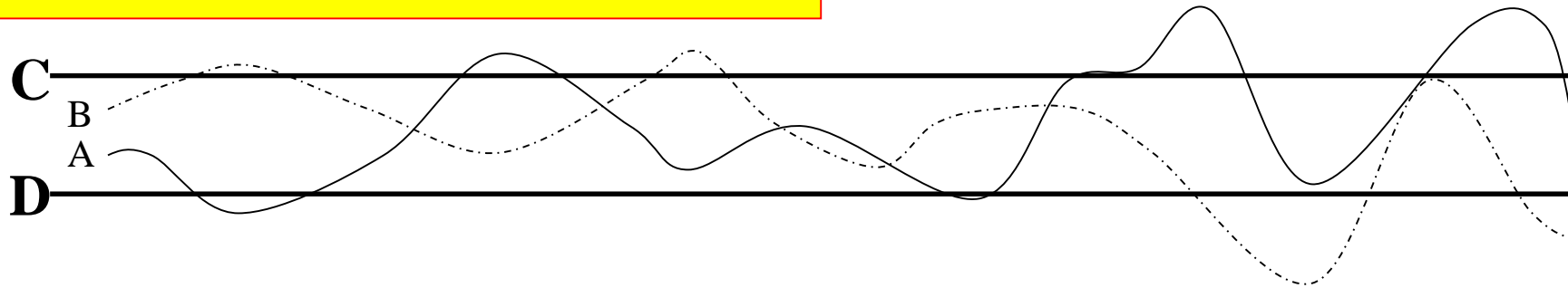
Allostatic load, leads to, or worsens, illness which is impacted by stress.



Conceptual Model of Allostasis & Allostatic Load

Normal Daily Stressors evoke allostasis



Chronic Stress causes Allostatic Load



- A  **Cumulative Ambient Demand**
- B  **Carrying Capacity**
- C - D** **Normal Tolerance Range**



Child & Family Asthma Studies Research Program



Family and Asthma Project



Aim: Test Biobehavioral Family Model

Subjects: N=272 Children with asthma and families

Variables: parent depression, family emotional climate, parental discord, parenting, parent-child relational security, child depression/anxiety, asthma disease activity, pulmonary function (FEV1)

Method: Self report and family interaction observation and rating

Ratings of Family Emotional Climate

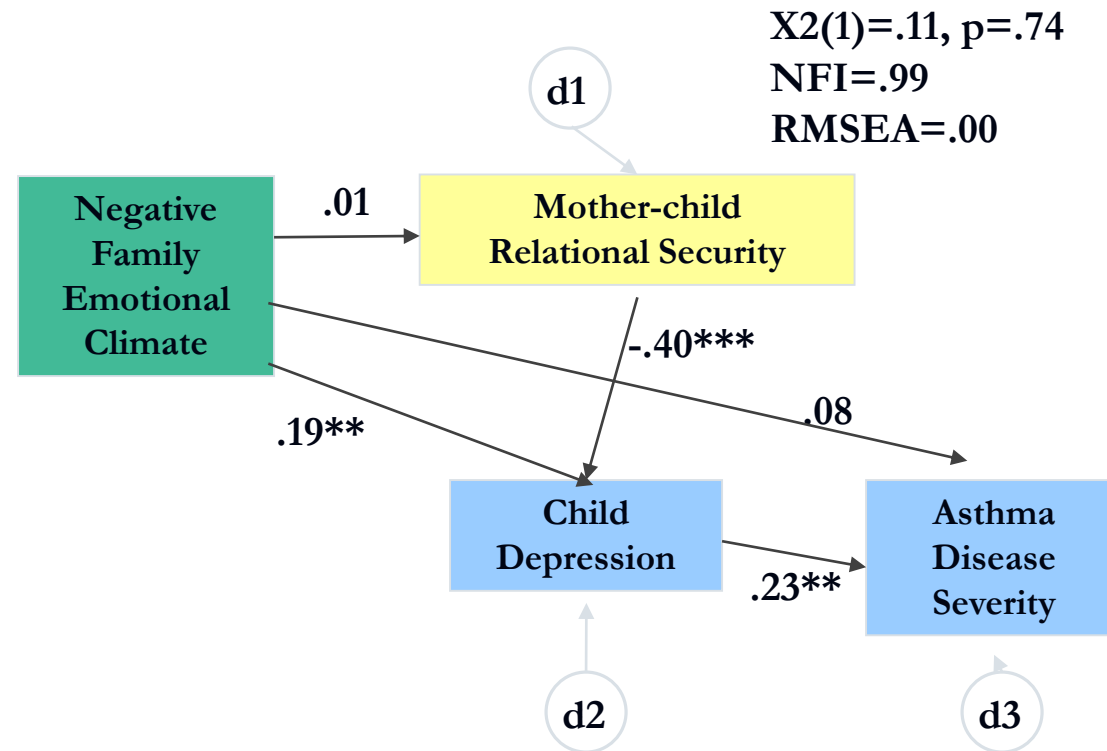
(Iowa Family Rating Scale, IFIRS)

Family Hostility: hostile, angry, critical, disapproving, and/or rejecting behavior (averaged across family members, across tasks) (Rating 0-9)

Family Warmth: expressions of liking, appreciation, praise, care, affection, concern, or support (averaged across family members, across tasks) (Rating 0-9)

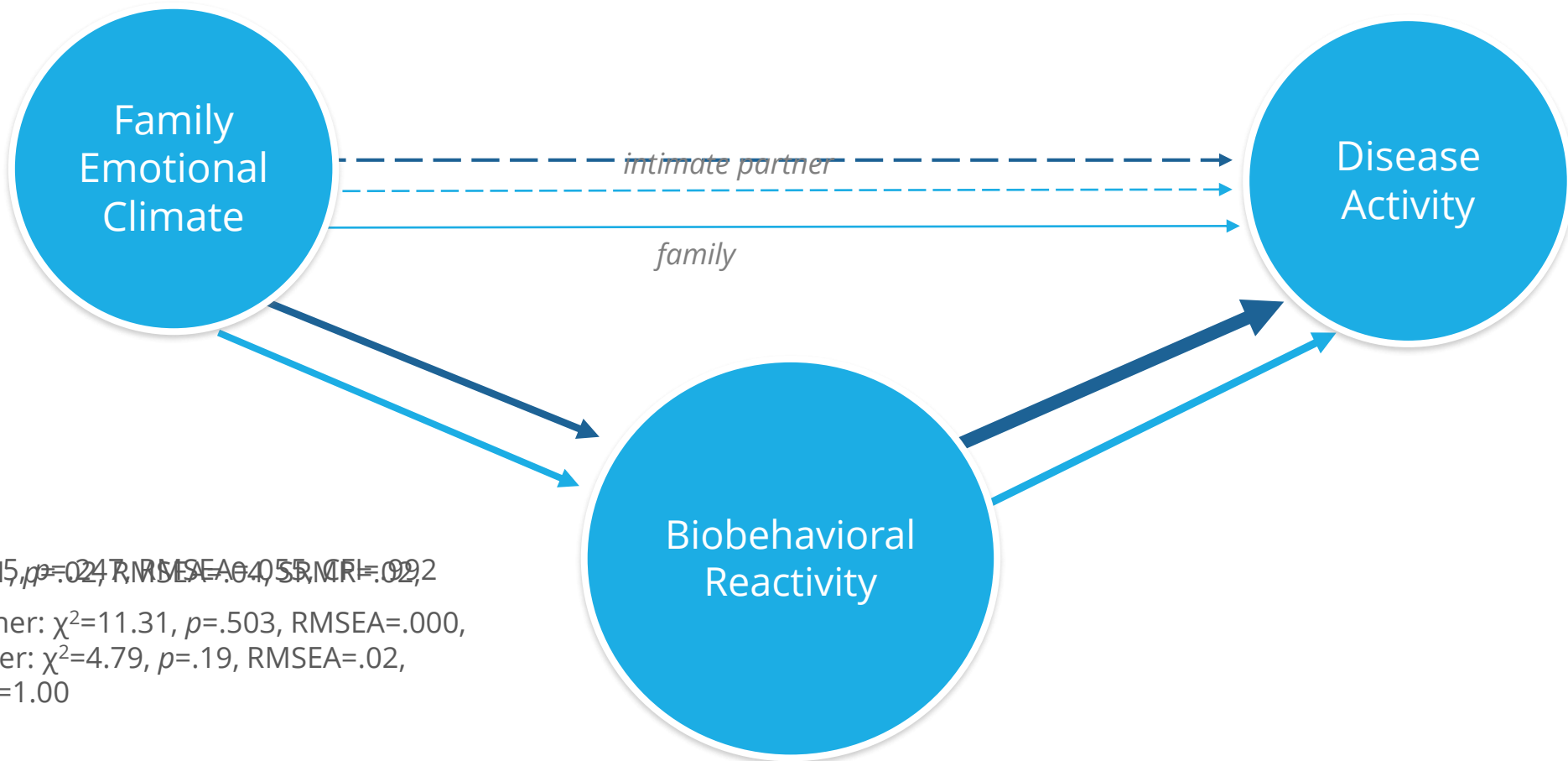
Family Emotional Climate: *average hostility minus warmth*

Negative family emotional climate (NEFC) and mother-child relational insecurity affect asthma disease activity *through* child depression



Empirical Support - Adults

- ✓ Validated with **underserved primary care** patients (Woods & Denton, 2014) and **Latino Americans** (Priest & Woods, 2014)
- ✓ Expanded to test **social support** (Woods, Priest & Roush, 2014)
- ✓ Inclusion of **allostatic load** (Priest et al., 2015)
- ✓ Delineate specific psychophysiological variables as **mediators** (Priest, Roberson, & Woods, 2018)
- ✓ **Health behaviors** as a mediator (Roberson et al., 2018)
- ✓ Disease activity operationalized as **chronic pain** (Signs & Woods, under review)



Family: $\chi^2=9.515, p=.024, RMSEA=.045, CFI=.992$
 Intimate Partner: $\chi^2=11.31, p=.503, RMSEA=.000, CFI=1.000$
 Family: $\chi^2=4.79, p=.19, RMSEA=.02, SRMR=.01, CFI=1.00$

- > Underserved Primary Care Patients ($n = 125$)
- > Chronic Pain – MIDUS ($n = 1,461$)

Signs & Woods, under review
 Woods & Denton, 2014

Application of BBFM – Residency Training

PURPOSE:

Theoretical, evidence-based framework for behavioral scientist

Provide a unique lens for residents – create a paradigm shift

Increase emphasis on importance of families, family systems for health

Convert complexity of close relationships to specific, digestible content

Perceive, Assess, Intervene – Goals for residents:

- (1) Recognize (how) families impact health
- (2) Observe and assess relational processes
- (3) Intervene (directly, or via collaboration and referral)

Application of BBFM – Residency Training

DIDACTIC TRAINING: *Use of BBFM as theoretical orientation emphasizing family influences on health in usual behavioral health content*

Examples:

Challenging patients

Family violence, child abuse

Integrated behavioral medicine

Motivational interviewing

Spirituality

EX: Health Behavior Change

Use **BBFM to teach theory** behind how social networks influence health behavior, health outcomes

Describe research substantiating BBFM pathways – e.g., smoking/cessation, binge drinking/decreased alcohol use, exercise, using food to cope

Describe **familiar, basic interventions** – e.g., assessing readiness for change

Connect to **systemic interventions** – assessing relational barriers to change, social supports, family members' health behaviors, inviting family in to behavior change intervention, scale systemic buy-in

Application of BBFM – Assessment

EXPERIENTIAL TRAINING:

BBFM checklist for observing family processes –

- Focus on emotional climate (strain vs. support), emotional connection vs. neglect or rejection, power dynamics – systemic and dyadic processes
 - ***AFFECT BOTH HEALTH BEHAVIORS AND STRESS-RELATED PATHWAYS AFFECTING HEALTH OUTCOMES, so...***
- Secondary focus on family emotional climate influence on biobehavioral reactivity observed

PERSON-OF-THE-PHYSICIAN TRAINING:

Self-assessment via genogram work

Focus on systemic patterns, illness, and wellbeing in family-of-origin → increase awareness, likelihood of seeing connections in patients

Highlight families and health themes in own genogram, connect to development of self as a physician and physician-patient relationships

Application of BBFM – Brief Interventions



- Focus on basic skill development – **reflecting, reframing**
- Emphasize patients' **strengths, resilience**
- **Educate** patients regarding impact of family relationships on health
- Highlight, identify **strengths of patients' relationships with supportive others**
- **Recruit** patients' family relationship supports to attend appointments
- Invite individual patients to disclose to and **rely on supportive family** and friends
- **Expand focus** of usual interventions to include family – e.g., relational motivational interviewing

Application Discussion!



*HOW CAN THE BBFM FURTHER YOUR OWN
TEACHING & PRACTICE OF INTEGRATED MEDICINE?*

Session Evaluation

Use the CFHA mobile app to complete the evaluation for this session.

Thank you!

